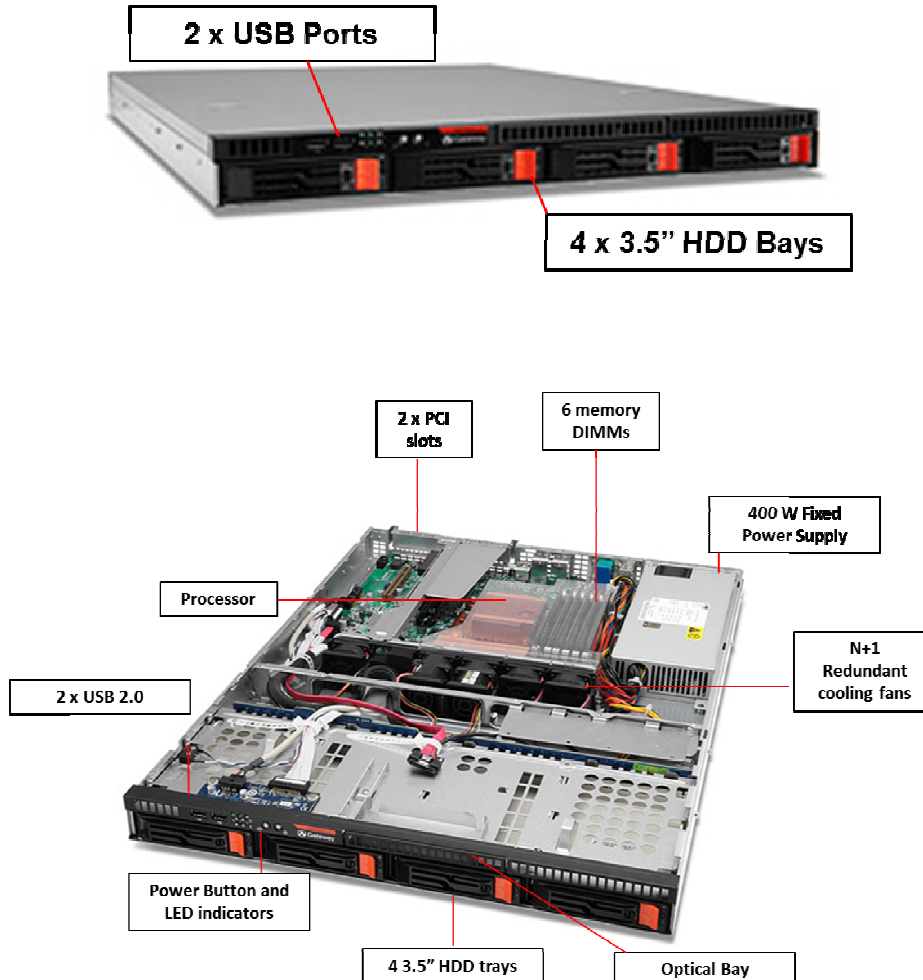


## AR320 F1 Product Overview

The AR320 F1 is a single-socket 1U server that delivers great performance and enterprise-level scalability in a space-saving design. Driven by a robust processor, huge memory footprint, and a Gold-level-efficiency power supply, this rack server effectively handles SMB as well as enterprise business operations for departments and branch offices.

### Product Front View

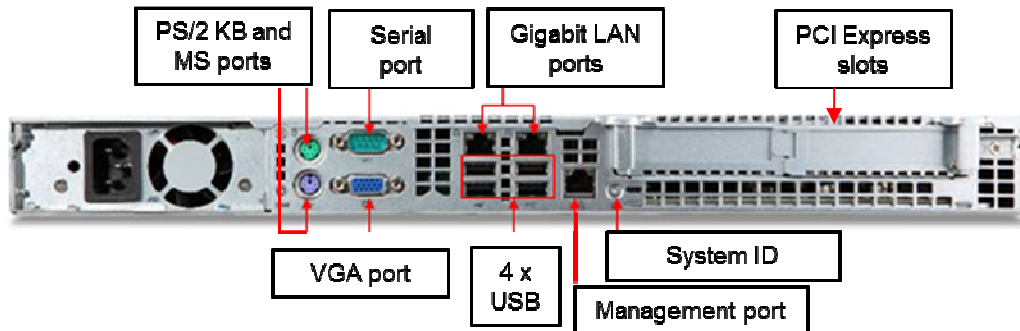


### Product Inside View

1. 6 x ECC DDR3 1066/1333 MHz registered or unbuffered memory slots
2. 1 x Intel® Xeon® 3400 series or Intel® Pentium® processor supporting up to 4-cores
3. 1 x 400 W 80 PLUS® gold level efficient fixed power supply
4. N+1 redundant fans
5. 2 x USB 2.0 Front-mounted connectors
6. Power button, System ID button, LED indicators (Power, HDD activity, LAN 1-2 status, system ID/status/fault)
7. Support for up to four 3.5" hot-plug SATA or SAS hard disk drives
8. Slim-line Optical drive bay
9. 2 x PCI Express® slots

## Acer AR320 F1 Specifications

### Product Rear View



1. PS2 keyboard connector
2. PS2 mouse connector
3. 4 x USB2.0 connectors
4. Management IPMI LAN port
5. COM (Serial) connector
6. Video connector
7. 4 x USB 2.0 connectors
8. 2 x Gigabit LAN connectors
9. ID LED

### What's New

- Intel® Xeon® 3400 series, Intel® Pentium® processor
- 1 x 400 W 80PLUS® gold-level efficient power supply
- DDR3 memory
- iSCSI boot
- ENERGY STAR® certification

## Product Specifications

### Processors and chipset

- Intel® Xeon® 3400 series, Intel® Pentium® processor
- Intel® 3420 Chipset

### Memory<sup>1</sup>

- Memory capacity:
  - Registered DIMM: 2, 4, 8 GB
  - Unbuffered ECC DIMM: 2, 4 GB
- Up to 32 GB registered DIMMs when fully populated with 2 DIMMs per channel in 4 slots
- Up to 16 GB unbuffered DIMMs when fully populated with 2 DIMMs per channel in 4 slots

### Network controller

- 2 x Integrated Intel® 82574L single-port Gigabit Ethernet Controllers (2 ports total)

<sup>1</sup> Mixed use of registered memory and unbuffered ECC memory not supported.

## Acer AR320 F1 Specifications

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### Storage

- Hard disk form factor: 3.5"
- Type: SAS/SATA with hot plug capability
- HDD Capacity (enterprise level):
  - 3.5" SAS HDD capacity: 300 GB, 450 GB, 600 GB
  - 3.5" SATA HDD capacity: 250 GB, 500 GB, 1TB, 2TB
- 3.5" Maximum capacity:
  - Up to 8 TB SATA (2 TB 3.5" x 4 HDDs)
  - Up to 2.4 TB SAS (600 GB 3.5" x 4 HDDs)

### Storage controllers

- Integrated Intel® 3420 Chipset Serial ATA host controller with RAID 0, 1, 5, 10 support
- Optional PCIe® 4-port and 8-port 6Gb/s SAS RAID card (standard on some models)

### Expansion slots

- One Low Profile PCI-E 2.0 x16 slot (with x8 link)
- One Low Profile PCI-E 2.0 x8 slot

### Management

- Acer Smart Server Manager
- System ID LED buttons, System Health LED
- Acer Smart Console for server management and KVM over IP remote management

### Deployment/serviceability

- Acer Smart Setup
- BIOS DOS Update Tool
- IPMI Firmware Update Tool supports DOS and web UI

### Operating systems

- Windows Server® 2003
- Windows Server® 2008
- Windows Server® 2008 R2
- Red Hat® Enterprise Linux® 5.4
- SUSE® Linux® Enterprise Server 11

## Acer AR320 F1 Specifications

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### Input/output interface

#### Front

- Power button
- HDD activity indicator
- USB ports
- LED indicators: power, HDD activity, LAN port 1 through 4, and ID

#### Rear

- PS2 keyboard port
- PS2 mouse port
- Four USB 2.0 ports
- Four RJ-45 ports (quad Gigabit NIC) with activity and link indicators
- RJ-45 port (dedicated for management NIC) with activity and link indicators
- Serial (DB-9) port
- SVGA (DB-15) port
- ID LED

### Optical drive

- Slim-line SATA DVD/RW

### Chassis/form factor

- 1U rack optimized

### Power supply

- 400 W 80 PLUS® Gold-level efficient fixed power supply

### Regulatory Compliance standards

#### EMC

- FCC (Class A)
- CE (Class A)
- BSMI (Class A)

#### Safety

- UL/cUL
- CB
- Nemko/GSBSMI

## Acer AR320 F1 Specifications

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### Technical Specifications

<b>Dimensions (with bezel)</b>	444 (W) x 638 (D) x 43 (H) mm (17.5 x 25.1 x 1.7 inches)	
<b>Form factor</b>	1U rack optimized	
<b>Weight (approximate)</b>	Maximum (All component slots and sockets fully populated)	12.7 kg (28.7 lbs.)
	Minimum (HDD, power supply and processor installed)	10.3 kg (23.27 lbs.)
<b>BTU rating</b>	Maximum	1364 BTU/hr. (at 100 VAC) 1362 BTU/hr. (at 220 VAC)
<b>System inlet temperature</b>	Operating	5° - 35°C (41° - 95°F) at sea level, no direct sustained sunlight. Maximum rate of change is 15° C/hr. (27°F/hr.). The upper limit depends on the type and number of options installed
	Non-operating	-20° - 60°C (-4° - 140°F)
<b>Relative humidity (non-condensing)</b>	Operating	30 - 80% relative humidity (Rh), 35°C (95 °F) maximum wet bulb temperature, non-condensing
	Non-operating	Up to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing
<b>Dielectric voltage withstand</b>	Input to output	3000 VAC/s
	Input to ground	1800 VAC/s
<b>Acoustic Noise</b>	Listed are the declared A-weighted sound power levels (LWAd) and declared average bystander position A-weighted sound pressure levels (LpAm) when the product is operating in a 21°C ambient environment. Noise emissions were measured in accordance with ISO 7779.	
	Idle	LWAd: 5.1 BA / LpAm: 40 dBA
	Operating	LWAd: 5.7 BA / LpAm: 44 dBA
<b>NOTE:</b> Sound level may vary with different options installed.		
<b>Emissions Classifications (EMC)</b>	FCC rating	Class A
	Normative standards	E CISPR 22; EN55022; EN55024; FCC CFR 47, Pt. 15; ICES-003; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
<b>Power supply</b>	Rated steady state power	401.614 W (at 115 VAC)
	Maximum peak power	401.614 W (at 115 VAC)

## Acer AR320 F1 Specifications

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### Standard Features

#### Processors

##### Intel® Xeon® processor

X3450 (8 MB L3 cache, 2.67 GHz, 1333 FSB, DDR3 1333 MHz, 95 W)

##### Intel® Pentium® processor

G6950 (3 MB L3 cache, 2.8 GHz, DDR3 1333/1066 MHz, 73 W)

#### Chipset

Intel® 3420 Chipset

<b>Memory<sup>2</sup></b>	<b>Type</b>	DDR3 1066/1333 MHz registered memory DDR3 1066/1333 MHz unbuffered ECC memory
	<b>DIMM sockets</b>	6
	<b>Capacity</b>	Registered DIMM: 2 / 4 / 8 GB Unbuffered ECC DIMM: 2 / 4 GB
	<b>Maximum capacity</b>	Registered DIMM: 32 GB Unbuffered ECC DIMM: 16 GB
<b>Memory protection</b>	ECC	
<b>Network controller</b>	2 x Integrated Intel® 82574L single port Gigabit Ethernet Controllers	

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<sup>2</sup> Mixed use of registered memory and unbuffered ECC memory not supported.

## Acer AR320 F1 Specifications

### Expansion Slots

The primary I/O bus for the main board is PCIe® Gen2. The following table lists the characteristics of the PCI-E bus segments.

#### PCI express® Bus Segment Characteristics of PCI Express® Topology

Expansion Slot #	# of slots	Type	Bus Width <sup>1</sup>	Vol.	Con. Width	Length
PCIe®	1	PCIe® Gen 2	x8	3.3V	x8	Low Profile
PCIe®	1	PCIe® Gen 2	x8	3.3V	x16	Low Profile

#### NOTE:

1. "Bus Width" refers to the number of physical electrical lanes running to a PCIe® connector.
2. Default bus assignment (in decimal). Inserting cards with PCI™ bridges may alter the actual bus assignment number.
3. Slots are enumerated differently based on the operating system. Microsoft® operating systems enumerate Device ID by bus starting from the lowest bus to the highest.

**Storage controller** Integrated Intel® 3420 Chipset, I/O co-controller

<b>Integrated Serial ATA controller</b>	<b>Simultaneous drive transfer channels</b>	6 channels
	<b>Transfer rate synchronous (maximum theoretical)</b>	3 Gb/s per channel
	<b>Data transfer method</b>	Non-RAID mode RAID mode
	<b>Drive support</b>	Serial ATA
	<b>Data transfer modes</b>	Legacy mode Combined mode
	<b>Protocol</b>	Serial ATA
	<b>Feature</b>	NCQ (Native Command Queuing) AHCI (Advanced Host Controller Interface)
	<b>RAID levels supported</b>	0, 1, 5, 10
	<b>RAID features</b>	<ul style="list-style-type: none"> <li>• Supports multiple logical volumes</li> <li>• Supports setup through ROM based array configuration utility installation scripting</li> </ul> <b>NOTE:</b> This controller requires the software RAID driver to support hot-plug functions.
	<b>RAID OS support</b>	Windows Server® 2003 Windows Server® 2008 Windows Server® 2008 R2

## Acer AR320 F1 Specifications

<b>Embedded single-port Gigabit server adapter (2 x Intel® 82574L for dual port total)</b>	<b>Network interface</b>	10Base-T 100Base-TX 1000Base-TX
	<b>Compatibility</b>	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX
	<b>Data transfer method</b>	Four lane (x4), 100 MHz PCI Express reference clock
	<b>Network transfer rate</b>	10Base-T (half-duplex) 10 Mb/s
		10Base-T (full-duplex) 20 Mb/s
		100Base-TX (half-duplex) 100 Mb/s
		100Base-TX (full-duplex) 200 Mb/s
		1000Base-TX (half- and full-duplex) 2000 Mb/s
	<b>Connector</b>	RJ-45
	<b>Cable support</b>	CAT 5e wire
	<b>Virtualization acceleration</b>	Intel® I/O acceleration technology Virtual Machine Device Queues (VMDq) PCI-SIG® SR-IOV implementation
	<b>Manageability</b>	NC-SI, SMBus, PXE, iSCSI boot

## Storage

<b>Maximum internal storage</b>	<b>Hard disk drive</b>	<ul style="list-style-type: none"> <li>• Up to 4 hot-pluggable 3.5" SATA / SAS HDD</li> <li>• Up to 8 TB SATA</li> <li>• Up to 2.4 TB SAS</li> </ul>
	<b>3.5" Maximum capacity</b>	

## Drive Support – Optical and Hard Disk Drive

### A (Slim Media Bay)



## Optical Drive support

Drive	Quantity Supported	Bay Supported	Required Controller
Slim type SATA DVD/RW Optical Drive	Up to 1	A	Integrated SATA controller



## Acer AR320 F1 Specifications

### Hard Disk Drive support

Drive	Quantity Supported	Bay Supported	Required Controller
3.5" SATA/SAS hard drives	4	0 - 3	Integrated SATA controller for up to 4 SATA HDD's 4-port SAS RAID card*
<b>NOTE:</b> Transfer rates of drives are dependent on the maximum transfer rate supported by the host bus adapter (HBA) or controller. *standard on some models			

### Tape Backup Drive Support

Drive	Bay Supported	Required Controller
LTO-3 1U SAS Rackmount (external) Tape Drive kit	External	SAS card
LTO-4 1U SAS Rackmount (external) Tape Drive kit	External	SAS card

### Graphics

Integrated graphic controller with 32 GB VRAM

- Max 1600 x 1200 resolution @ 75 Hz with 256 colors

### Industry standard compliance

IPMI 2.0  
 SMBIOS 2.6.1 compliant  
 ACPI v2.5 compliant  
 PXE support  
 WOL support  
 Microsoft Windows® Hardware Logo Program Requirement  
 ENERGY STAR® Compliant

### Manageability

Integrated iBMC management controller, supporting base board management and KVM-over-IP  
 Acer Smart Setup  
 Acer Smart Console  
 Acer Smart Server Manager

### Security

Administrator / user password  
 Keyboard password  
 Power on password  
 USB port control  
 Intrusion switch  
 Single mechanical lock  
 TPM controller (TPM v1.2 Compliant) (manufacturing option)

## Acer AR320 F1 Specifications

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<b>System cooling</b>	<ul style="list-style-type: none"> <li>• Passive CPU heat sink, supporting Intel® Xeon® processors with TDP up to 95 W</li> <li>• Two (40 mm x 40 mm x 56 mm) plus three (40 mm x 40 mm x 28 mm) system fans with PWM control <ul style="list-style-type: none"> <li>• N+1 redundant fan design</li> </ul> </li> </ul>
<b>Operating systems and virtualization software support</b>	Windows Server® 2003 Windows Server® 2008 Windows Server® 2008 R2 Red Hat® Enterprise Linux 5.4 SUSE® Linux Enterprise Server 11

## Server Management, Utilities, and Applications

Comprehensive management solutions deliver powerful and intuitive management features to simplify server set ups, configuration, management, monitoring, and reporting for the entire lifecycle of servers. Centralized administration and automatic management with remote access control free the IT resources and meet the complex business environment. Proactive monitoring and notification lead higher customers' satisfaction and higher levels of operational efficiency.

<b>Smart Setup 2.0</b>	Easy deployment via the latest version of Acer's Smart Setup. Smart Setup is available both in box as a driver packed installation DVD or a downloadable file to be put into a USB 2.0 device, and eases the deployment of Acer servers for any certified OS. Through its unique interface, users may select to have all the correct drivers be pre-deployed for the OS of their choosing, as well as setup hardware RAID devices, BMC settings (where available), and even clone the pre-settings to a bootable USB device to ease mass server deployments.
<b>Smart Console</b>	Web-based management utility to simplify system management with embedded iBMC, system monitoring and alerting, event handling, remote power control and KVM-over-IP. Smart Console is OS independent and offers virtual media through floppy, ODD, and removable disk.
<b>Smart Server Manager v1.1</b>	Offering 24-7 monitoring for system health and performance. Delivers proactive event management features including system event logging, event handling from e-mail and SNMP Trap (PET) alerting. Monitors onboard hardware, operating systems and virtual machines Allows remote control from KVM and Power control Satisfies management in web-based UI, role-based administration, and automated management scripts.
<b>Intelligent manageability</b>	<ul style="list-style-type: none"> <li>• Automatic Server Recovery (ASR)</li> <li>• Integrated Management Log</li> <li>• Front and Rear Unit ID (UID) button/LED</li> <li>• BIOS Update tool for DOS supporting DOS and Windows OS</li> <li>• IPMI Firmware Update tool supporting DOS and Windows OS</li> <li>• Backplane firmware update tool, supporting DOS and Windows OS</li> </ul>
<b>Environment-friendly products and approach</b>	Acer offers end-of-life product return, trade-in, and recycling programs in many geographic areas. Products returned to will be recycled, recovered or disposed of in a responsible manner.

## Acer AR320 F1 Specifications

### Memory Support Specification

Registered Type	DDR3 1066/ 1333 MHz Capacity: 2, 4, 8 GB Voltage: 1.5 V Maximum: 32 GB (8 GB x 4 DIMMs)
Unbuffered Type	DDR3 1333 MHz Capacity: 2, 4 GB Voltage: 1.5 V Maximum: 16 GB (4 GB x 4 DIMMs)

### Memory Population

The systems have six DIMM slots. The DIMM slots support DDR3-1333 registered/unbuffered ECC memory modules. The CPU provides two memory channels that support two UDIMM modules or three RDIMM modules per channel. Depending on the type of processor installed, the system can support up to six RDIMM modules for Intel® Xeon® 3400 series or four UDIMM modules for the Intel® Pentium® processor. Detailed memory population guidelines are shown in the table below:

For the system to function, DIMM modules must be installed following the slot sequence listed below. DIMM module of the same type, size and manufacturer must be installed in the same colored DIMM slots.

	Channel 1 DIMM slots			Channel 2 DIMM slots			Note
Configuration	1C	1B	1A	2C	2B	2A	
A			X				
B			X			X	
C		X	X		X	X	
D	X	X	X	X	X	X	SR, DR RDIMMs only

#### NOTES:

1. Place DIMMs in "X" location.
2. DIMM population must correspond to the above table.
3. DIMM modules support 2 GB and 4 GB DIMMs.
4. DIMM modules support 8 GB DIMMs.
5. Do not mix UDIMMs with RDIMMs.
6. Use single rank and dual rank RDIMMs only for configuration D.
7. RDIMM is only supported by Intel® Xeon® X3400 series processor.

## Acer AR320 F1 Specifications

Total Memory	Channel 1 DIMM slots			Channel 2 DIMM slots		
	1C	1B	1A	2C	2B	2A
2GB			2GB			
4GB			2GB			2GB
8GB		2GB	2GB		2GB	2GB
12GB	2GB	2GB	2GB	2GB	2GB	2GB
4GB			4GB			
8GB			4GB			4GB
16GB		4GB	4GB		4GB	4GB
24GB	4GB	4GB	4GB	4GB	4GB	4GB
8GB			8GB			
16GB			8GB			8GB
32GB		8GB	8GB		8GB	8GB

### Memory Identification

Generally, there is memory information printed on the label of the DIMM, but different vendors may have different formats. For example:

4GB 2Rx4 PC3-10600R xx xx xxx

#### 1. Density

- 2GB, 4GB, 8GB, 16GB
- Intel® Xeon® 3400 series processors support DIMMs organized by 1Gb, 2Gb or 4Gb DRAM chips

#### 2. Rank

- 1R = Single Rank
- 2R = Dual Rank
- 4R = Quad Rank

#### 3. Bit Organization

- This platform supports x4 and x8
- Note: It is not recommended to mix DIMMs with different bit organizations in one system

#### 4. Speed

- PC3 – 6400 => DDR3- 800
- PC3 – 8500 => DDR3- 1066
- PC3 – 10600 => DDR3- 1333

## Acer AR320 F1 Specifications

### Power Specification

400 W Power Supply							
Operational Input Voltage Range ( $V_{rms}$ )	100 to 240 VAC						
Frequency Range (Nominal) (Hz)	50 / 60						
Nominal Input Voltage ( $V_{rms}$ )	<b>100</b>	<b>120</b>	<b>200</b>	<b>208</b>	<b>220</b>	<b>230</b>	<b>240</b>
Max. Rated Output Wattage (W)	400	400	400	400	400	400	400
Nominal Input Current ( $A_{rms}$ )	4.73	3.873	2.273	2.187	2.069	1.9809	1.901
Max. Rated Input Wattage Rating (Watts)	460.7	455.2	446.6	446.3	445.7	444.8	444.3
Max. Rated VA (Volt-Amp)	399.9	399.8	399.7	399.4	399.2	399.1	399.1
Efficiency (%) at Max. Rated Output Wattage	86.805	87.831	89.509	89.512	89.585	89.739	89.828
Power Factor	0.997	0.9956	0.9881	0.9866	0.984	0.9809	0.9781
Leakage Current (mA)	0.22	0.27	0.46	0.48	0.51	0.53	0.55
Max. Inrush Current ( $A_{peak}$ )	12.2	20.2	29.2	33.6	41	44.3	45.1
Max. Inrush Current Duration (ms)	4.324	3.072	3.468	2.360	2.688	3.164	2.154
Max. British Thermal Unit Rating (BTU/hr.)	1364.51 5	1364.17 4	1363.83 3	1362.80 9	1362.12 7	1361.78 6	1361.786

Power supply comes with standard 400 watts 80 + Bronze level power efficiency.

1 KW = 3412 BTU/hr.

## Acer AR320 F1 Specifications

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### Hardware Key Options

- |                   |  |
|-------------------|--|
| <b>Memory</b>     | <ul style="list-style-type: none"><li>• DDR3 1333 MHz Unbuffered ECC: 2/ 4 GB</li><li>• DDR3 1066/1333 MHz Registered ECC: 2/ 4/ 8 GB</li></ul>  |
| <b>HDD</b>        | <ul style="list-style-type: none"><li>• SAS 3.5": 300 GB, 450 GB, 600 GB</li><li>• SATA 3.5": 250 GB, 500 GB, 1TB, 2 TB</li></ul>  |
| <b>SAS HBA</b>    | <ul style="list-style-type: none"><li>• SAS HBA, internal 2-ports/external 2-ports, PCI-E x1 interface</li></ul>   |
| <b>SAS RAID</b>   | <ul style="list-style-type: none"><li>• MegaRAID® SAS 9240-4i, 4 internal ports, PCIe x8, supporting RAID 0/1/10/5</li><li>• MegaRAID® SAS 9260-8i, 8 internal ports, 512 MB PCIe x8, supporting RAID 0/1/10/5/50/6/60</li><li>• LSI® BBU07/ Battery Backup Unit for MegaRAID® SAS 9260-8i</li></ul> |
| <b>Networking</b> | <ul style="list-style-type: none"><li>• Gigabit CT Desktop Adapter, Gigabit Adapter 10/100/1000 Mbps</li><li>• Gigabit ET Server Adapter, Gigabit 10/100/1000 Mbps, PCIe, dual-port</li></ul>  |

### Server Additional Options/Accessories

- |                                     |   |
|-------------------------------------|---|
| <b>TPM</b>                          | <ul style="list-style-type: none"><li>• TPM module (TPM 1.2)</li></ul>  |
| <b>Optical Drive</b>                | <ul style="list-style-type: none"><li>• Slim-line (12.7 mm tray) DVD/RW</li></ul>   |
| <b>Flash memory</b>                 | <ul style="list-style-type: none"><li>• USB low profile flash memory for VMware embedded</li></ul>  |
| <b>Tape &amp; Disk based backup</b> | <ul style="list-style-type: none"><li>• LTO-3 1U SAS Rackmount (external) Tape Drive kit</li><li>• LTO-4 1U SAS Rackmount (external) Tape Drive kit</li></ul> |
| <b>Rackmount kits</b>               | <ul style="list-style-type: none"><li>• Sliding rails (Cable Management Arm option available)</li></ul>   |

### Service and Support

Acer Servers offer a comprehensive service suite to take care of daily IT needs. Users can select the 3-year standard warranty or choose extended warranties and services<sup>3</sup>.

The standard warranty for the AR320 F1 includes three years Parts only.

Warranty repairs may be accomplished through the use of Customer Replacement Unit (CRU) parts. CRU parts include: Hot Plug Hard Drives and Hot Plug Power Supplies. These parts are designed for easy replacement without tools. Travel and labor charges may apply if customers decline to replace a CRU part.

In a continuing effort to improve the quality of our products, information in this document is subject to change without notice. Images shown are only representations of some of the configurations available for this model. Availability may vary depending on region.

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<sup>3</sup> Extension warranty services may vary by country. Please contact Acer authorized resellers for more information.

## Acer AR320 F1 Specifications

<b>Acer Standard Server Models</b>	<b>Part Number</b>
<b>Acer AR320 LFF Models</b>	
Acer AR320F1 PDC G6950, 1x2GB Unb., 250GB 7200 RPM HS HDD, 4x 3.5Inch HDD Bay, DVD-RW slim, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager, UPS Power Cable, no Mouse, no KB, Rail kit (1U) Included	TK.R6N00.031
Acer AR320F1 Xeon X3430, 1x2GB Unb., No HDD, 4x 3.5Inch HDD Bay, DVD-RW slim, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager, UPS Power Cable, no Mouse, no KB, Rail kit (1U) Included	TK.R6N00.032
Acer AR320F1 Xeon X3430, 2x2GB Unb., No HDD, 4x 3.5Inch HDD Bay, 4 Port 6G SAS RAID Controller, DVD-RW slim, 2x GBit LAN onboard, Acer Smart Setup, Acer Smart Manager, UPS Power Cable, no Mouse, no KB, Rail kit (1U) Included	TK.R6N00.033
<b>Acer Key Options</b>	<b>Part Number</b>
<b>Acer Memory</b>	
<b>Note: cannot mix Unbuffered memory with Registered memory</b>	
<b>Note: please refer to "Memory Support" Section for details on configuring memory</b>	
<b>Acer Unbuffered Memory</b>	
Acer 2GB DDR3-1333 Unbuffered Memory Kit (1 pc.)	TC.33100.035
Acer 4GB DDR3-1333 Unbuffered Memory Kit (1 pc.)	TC.33100.037
<b>Acer Registered Memory</b>	
Acer 2GB DDR3-1333 Registered Memory Kit (1 pc.)	TC.33100.029
Acer 4GB DDR3-1333 Registered Memory Kit (1 pc.)	TC.33100.031
Acer 8GB DDR3-1333 Registered Memory Kit (1 pc.)	TC.33100.042
<b>Acer Storage</b>	
<b>Acer SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives</b>	
Acer 250GB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.068
Acer 500GB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.066
Acer 1TB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.064
Acer 2TB 3Gb/s 7.2K 3.5-inch Enterprise SATA HDD Kit	TC.32700.062
<b>Acer SAS Hot Plug LFF (3.5-inch) Enterprise Drives</b>	
Acer 500GB 6Gb/s 7.2K 3.5-inch Enterprise SAS HDD Kit	TC.32700.108
Acer 1TB 6Gb/s 7.2K 3.5-inch Enterprise SAS HDD Kit	TC.32700.107
Acer 2TB 6Gb/s 7.2K 3.5-inch Enterprise SAS HDD Kit	TC.32700.106
Acer 300GB 6Gb/s 15K 3.5-inch Enterprise SAS HDD Kit	TC.32700.079
Acer 450GB 6Gb/s 15K 3.5-inch Enterprise SAS HDD Kit	TC.32700.077
Acer 600GB 6Gb/s 15K 3.5-inch Enterprise SAS HDD Kit	TC.32700.075
<b>Acer SAS Storage Controllers</b>	
Acer 4-port 6Gb/s SAS RAID Adapter (w/ mSAS-mSAS cable) Kit	TC.32300.028
Acer 8-port 6Gb/s SAS RAID Adapter (w/ mSAS-mSAS cable) Kit	TC.32300.034
Acer Battery Backup Kit for Cache module in 8port/16port SAS RAID Card	TC.34800.006
<b>Acer Tape Drives</b>	
Acer LTO-3/LTO-4 1U Rackmount (ext.) Chassis Kit	TC.34000.040
Acer LTO-3 HH (int.) Tape Drive Kit - Compatible with Acer Servers which support Internal LTO drives (or) 1U external Rackmount chassis kit	TC.34000.022
Acer LTO-4 HH (int.) Tape Drive Kit -Compatible with Acer Servers which support internal LTO drives (or) 1U external Rackmount chassis kit	TC.34000.024
<b>Acer Additional Upgrades</b>	
Acer Cable Arm (AR320 F1) Kit (1000mm Rack required)	TC.33700.010
Acer Gigabit Single Port LAN Adapter Kit	TC.32200.011
Acer Gigabit Dual Port Server LAN Adapter Kit	TC.32200.009

## Acer AR320 F1 Specifications

<b>Acer Operating Systems</b>	
<b>Windows Server Enterprise 2008</b>	
Acer ROK Windows SVR 2008 R2 Enterprise (64bit,25Clt,EN)	TC.34400.035
Acer ROK MICROSOFT Win SVR 2008 64bit Ent R2 10 Clt EN W/COA W/CD/DVD ACER 1-8CPU	TC.34400.034
<b>Windows Server Standard 2008</b>	
Acer ROK MICROSOFT Win SVR 2008 64bit Std R2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.033
<b>Microsoft Windows Server Foundation</b>	
Acer ROK MICROSOFT Win SVR 2008 64bit Foun R2 EN W/COA W/CD/DVD ACER 1CPU	TC.34400.039
<b>Microsoft Windows SBS Server Standard</b>	
Acer ROK MICROSOFT Win SBS 2008 64bit Std w/SP2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.041
Acer ROK MICROSOFT Win SBS 2008 64bit Prem w/SP2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.043
Acer ROK Win SBS 2011 Standard Add-on (64bit, 5Clt, EN) Kit	TC.34400.136
Acer ROK Win SBS 2011 Premium Add-on (64bit,5Clt,EN) Kit	TC.34400.138
<b>Microsoft CAL's</b>	
Acer Windows Server 2008 CAL EN (5 Device)	TC.34400.061
Acer Windows Server 2008 CAL EN (5 User)	TC.34400.063
Acer Windows SBS 2011 Prem CAL EN (5 Device)	TC.34400.158
Acer Windows SBS 2011 Prem CAL EN (5 User)	TC.34400.159
Acer Windows SBS 2011 Std CAL EN (5 Device)	TC.34400.160
Acer Windows SBS 2011 Std CAL EN (5 User)	TC.34400.161
<b>Acer Services</b>	
Acer Upgrade from 3 years Parts only to 3 years Parts/Labor/On-site Service (AT310/AR320/AT350)	146.AD314.001
Acer Upgrade from 3 years Parts only to 3 years Parts/Labor/On-site Service w/4hr response (AT310/AR320/AT350)	146.AD316.004
Acer Upgrade from 3 years Parts only to 5 years Parts/Labor/On-site Service w/4hr response (AT310/AR320/AT350)	146.AD317.004